

CLAIMS

1. A substantially purified polypeptide comprising an amino acid sequence selected from the group consisting of:
 - 5 a) an amino acid sequence as set forth in SEQ ID NO:1,
 - b) an amino acid sequence as set forth in SEQ ID NO:4,
 - c) an amino acid sequence which is at least 95% identical to SEQ ID NO:1, and
 - d) an immunogenic fragment of any one of a) to c),
 wherein the polypeptide raises an immune response against *N. caninum* when

10 administered to an animal.
2. The polypeptide of claim 1 which comprises an amino acid sequence as set forth in SEQ ID NO:1.
- 15 3. The polypeptide of claim 1 which comprises an amino acid sequence as set forth in SEQ ID NO:4.
4. A composition comprising a pharmaceutically acceptable carrier and a polypeptide according to claim 1.

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5. The composition of claim 4 which comprises an additional polypeptide which raises an immune response against *N. caninum* when administered to an animal.
6. The composition of claim 5, wherein the additional polypeptide comprises an

25 amino acid sequence selected from the group consisting of
 - a) an amino acid sequence as set forth in SEQ ID NO:2,
 - b) an amino acid sequence as set forth in SEQ ID NO:5,
 - c) an amino acid sequence as set forth in SEQ ID NO:6,
 - d) an amino acid sequence which is at least 95% identical to SEQ ID NO:2, and
 - 30 e) an immunogenic fragment of any one of a) to d).
7. The composition of claim 4 further comprising an adjuvant
8. The composition of claim 7, wherein the adjuvant is selected from the group

35 consisting of aluminum salts, water-in-oil emulsions, oil-in-water emulsions, saponin, QuilA and derivatives, iscoms, liposomes, cytokines, DNA, microencapsulation in a

solid or semi-solid particle, Freund's complete and incomplete adjuvant or active ingredients thereof, DEAE dextran/mineral oil, Alhydrogel, Auspharm adjuvant, and Algammulin.

- 5 9. A method of raising an immune response against *N. caninum* in an animal, the method comprising administering to the animal an effective amount of a composition according to claim 4, to produce an immune response against the polypeptide thereby providing an immune response against *N. caninum*.
- 10 10. The method according to claim 9, wherein administering of the composition is by injection via intramuscular, subcutaneous, intradermal or intraaperitoneal routes, or included as an additive in feed or water.